

SEMENOVKER, N. N.

20

Improving the quality of slag portland cement. N. N. Semenovker. *Tsement* 4, No. 6, 16-26 (1936).—Practice of the Kamen-koe plant is described. R. E. S.

AS 4 314 METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND CODES										3RD AND 4TH CODES									
COMMON ELEMENTS										COMMON VARIABLES INDEX									
SEMENTOVKER, N. N.										B-210									
COLOURED SLAG CEMENTS. N. N. SEMENOVKER (Trans. Inst. Cements, U.S.S.R., 1937, No. 18, 82-83).—Tests on coloured cements made from samples of slag from four U.S.S.R. factories show that magnetic separation of Fe is essential to prevent the formation of brown stains. Decorative cements with satisfactory mechanical properties were obtained from a meal containing slag 85, clinker 15, and gypsum 10%; the colouring materials were: ochre (15), bauxite (15), minium (10), Cr <sub>2</sub> O <sub>3</sub> (10), and ultramarine (10%).																			
ASB-31A METALLURGICAL LITERATURE CLASSIFICATION										120000 120000									
1ST AND 2ND CODES										3RD AND 4TH CODES									
1ST AND 2ND CODES										3RD AND 4TH CODES									

SEMENTYER, N. N.

Installation for grinding of (unslaked) lime. N. Sementyev. Cement-Wapno-Gips 10(19), 223-9(1934). The installation for grinding unslaked lime was built in Latvia in 1932. It consists of a crusher, an intermediate silo, a ball mill with an air classifier, and several product silos provided with vertical agitators. The output is 1.5-2 tons/hr. and the power consumption is 15-17 kw.-hrs./ton. The raw material consists of dolomitic quicklime contg. 80-85% of active  $\text{CaO} + \text{MgO}$  (requiring water to lime ratio 0.65-0.75), ash (clinker), and raw gypsum; all these 3 ingredients are mixed at a ratio 85:10:5. P. J. H.

KIFER, L.I.; SEMENOVSKAYA, I.B.

Measuring the permeability of ferromagnetic powders. Zav. lab. 31  
no.9:1100-1102 '65. (MIRA 18:10)

L 24509-66 EWT(d)/EWP(e)/EWT(m)/EWP(w)/EWP(c)/EWP(v)/T/EWP(t)/EWP(k)/EWP(l)/

ACC NR: AP6007705 ETC(m)-6 IJP(c) SOURCE CODE: UR/0413/66/000/003/0084/0084

JD

AUTHOR: Zhigadlo, A. V.; Kifer, I. I.; Semenovskaya, I. B.

ORG: none

TITLE: Water-base magnetic paste for detection of powder metal flaws in parts.  
Class 42, No. 178557

SOURCE: Izobreteniya, promyshlennyye obraztzy, tovarnyye znaki, no. 3, 1966, 84

TOPIC TAGS: flaw detection, powder metal, magnetic paste, paste

ABSTRACT: An Author Certificate has been issued describing a water-base magnetic paste for detection of powder metal flaws in parts; the paste contains a ferromagnetic powder, alkals and wetting agents. In order to make the paste more sensitive to flaw detection, its composition is as follows: ferromagnetic powder, 50%; potassium bichromate, 9%; soda ash (or any other commercial-grade soda), 16%; glycerin, 26%, wetting agent, 9%. [LD]

SUB CODE: 11/ SUBM DATE: 08Aug64/

Card 1/1 B14

UDC: 620.179.14

SEMENOVSKAYA, K.S.

20-1-64/64

AUTHOR:  
TITLE:

SEMEVOYSKAYA, K.S.  
On the Sexual Glands of the Hybrids of Sturgeon and Sterlet in  
Connection with the Question of Their Reproductive Capacity.  
(O polovykh zhelezakh gibrida meshdu osetrov i sterlyadyu v svyazi s vopro-  
som o yego sposobnosti k razmnozheniyu. Russian).  
Doklady Akademii Nauk SSSR, 1957, Vol 114, Nr 1 (U.S.S.R.)

PERIODICAL:  
ABSTRACT:

It is well known that the different species of sturgeon (and even  
sterlets which are clearly fresh-water fish) lose their reproduc-  
tive capacity in artificial fish-ponds.

In this context it was of interest to determine whether the hy-  
brid species sturgeon-sterlet is subject to the same phenomena as  
the sterlet.

Over thirty specimens of the hybrid species sturgeon-sterlet were  
investigated.

The investigations led to the following results:

During the first year, the sexual glands of the sturgeon (female  
and male) as well as of the hybrid species sturgeon-sterlet de-  
velop normally.

However, from the third year on, a termination of the development  
of the sexual glands could be observed. Only in very few male spe-

Card 1/2

MIKHAYLOV, N.V.; FAYNBERG, E.Z.; SEMENOVSKAYA, L.A.

Study of the structure of cellulose hydrate fibers by the  
method of sorption of quaternary ammonium bases from  
aqueous solutions. Vysokom. soed. 6 no.3:522-526 Mr'64.  
(MIRA 17:5)

1. Nauchno-issledovatel'skiy institut iskusstvennogo volokna.

MIKHAYLOV, N.V.; FAYNBERG, E.Z.; SEMENOVSKAYA, L.A.

Structure of cellulose hydrate fibers from data of the sorption  
of bases from the liquid phase. Vysokom. soed. 7 no.11:1950-1955  
N '65. (MIRA 19:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo  
volokna. Submitted December 25, 1964.



SEMENOVSKAYA, M. (DR.)

The preliminary program of the Electoretinography (ERG) Conference to be held at Lubacovics, near Brno, on 24 - 26 September 1999 with international participation is as follows:

2. Prof. Dr. G. G. Demirkhanyan (Yerevan, USSR): Mechanics of EKG Registration.
3. Dr. V. Otkh (Münster, Western Germany): Forms and Conditions of the Leads of Intravital Potentials.
4. Dr. L. V. Khurudze (Tbilisi, USSR): Basic Mechanical Faults in Present Clinical Electrocardiography and the Way to their Elimination.
2. Dr. M. Samosovskaya (Moscow, USSR): Central Regulation of Electrocardiography.
4. Dr. I. M. Avakyan (Yerevan, USSR): On the Problem of Electrocardiography in X-rays.
6. Dr. L. V. Khurudze (Tbilisi, USSR): Functional Limits of the Beta in X-rays.
11. Dr. M. A. Allahverdiyev (Yerevan, USSR): Changes of the EKG Wave in Man.
2. Dr. B. I. Melik-Shayun (Ghent, Belgium) / *Dr. B. I. Melik-Shayun (Yerevan, USSR)*: EKG in Glaucoma.
3. Dr. E. Z. Embek (Rotterdam, Netherlands): EKG in Chorioidemia.
4. Dr. M. Samosovskaya (Moscow, USSR): Electrocardiography and Rheumatology at the Ophthalmologic Clinic.
6. Prof. Dr. G. G. Demirkhanyan, Prof. Dr. B. I. Melik-Shayun (Yerevan, USSR): EKG in Diseases of the Myopia.
2. Dr. P. O. Mekouze (Leningrad, USSR): Aseptomometry of the Sight Analyzer in Healthy and Ill Men.
2. Dr. M. Avakyan (Yerevan, USSR): Atrofia Nerv. Optici in EKG.

MUTRIKHINA, N.N.; SEMENOVSKAYA, N.A. (Arkhangel'sk)

Case of malignant hypertension in aplasia of the kidney and  
multiple paragangliomas. Klin.med. 39 no.1:131-133 Ja '61.  
(MIRA 14:1)

1. Iz kafedry gosspital'noy terapii (zav. - doktor med.nauk  
F.M. Vasilevskaya) i kafedry patologicheskoy anatomii (zav. -  
kand.med.nauk M.B. Rappoport) Arkhangel'skogo meditsinskogo  
instituta (dir. - dotsent A.A. Kirov).  
(HYPERTENSION) (KIDNEYS—ABNORMALITIES AND DEFORMITIES)

KOPYTOV, V.F., doktor tekhn. nauk, otv. red.; VESELOV, V.V.,  
kand. khim. nauk, red.; YERINOV, A.Ye., kand. tekhn. nauk,  
red.; TISHCHENKO, A.T., kand. tekhn. nauk, red.; DASHEVSKIY,  
L.N., kand. tekhn. nauk, red.; CHEGLIKOV, A.T., kand. tekhn.  
nauk, red. SIGAL, I.Ya., kand. tekhn. nauk, red.;  
SEMENKOVSKAYA, P.T., kand. tekhn. nauk, red.; YEREMENKO, A.S.,  
kand. tekhn. nauk, red.; DYBAN, Ye.P., kand. tekhn. nauk, red.;  
FEDOROV, V.I., kand. tekhn. nauk, red.; POL'SKIY, N.I., kand.  
fiz.-mat. nauk, red.

[Transactions of the Second Heat Engineering Conference of  
Young Research Workers] Trudy vtoroi teplotekhnicheskoi kon-  
ferentsii molodykh issledovatelei. Kiev, Izd-vo AN USSR, 1963.  
278 p. (MIRA 17:6)

1. Teplotekhnicheskaya konferentsiya molodykh issledovateley,  
2, 1963. 2. Chlen-korrespondent AN Ukr.SSR (for Kopytov).

67773

SOV/126-3-5-27/29

18.9100

AUTHORS: Koval'skiy, A.Ye., and Semenovskaya, S.V.

TITLE: On the Additional Weakening of X-ray Interferences in Powder Specimens

PERIODICAL: Fizika metallov i metallovedeniye, Vol 8, 1959, Nr 5, pp 794-796 (USSR)

ABSTRACT: It is commonly known that a correct structural interpretation of interference is impossible without taking into consideration the influence of sub-microstructural factors on the intensity (primary and secondary extinction, tertiary distortions, errors in the superposition of atomic layers). Besides, as shown by Wilchinsky (Ref 1), an additional weakening in intensity is observed in powder specimens which is due to "entanglement" of the reflected rays in coarse-grained non-compact specimens. Such an entanglement, according to Wilchinsky (Ref 1) is constant for all angles of reflection. If calculations are carried out, not for the absolute intensity of any one particular line but for the intensities of several lines, as has been done by Kochanovska (Ref 2) and Iveronova et al (Ref 3), the constant multiplier is excluded and hence the "powder"

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SOV/126-8-5-27/29

On the Additional Weakening of X-ray Interferences in Powder Specimens

factor of intensity could apparently be ignored. However, in practice this multiplier appears to change with the angle of reflection. This has been found by McKeehan and Warren (Ref 4) for tungsten powder. The present authors also verified this fact on three tungsten powders: (a) coarse-grained, (b) fine-grained unmilled, and (c) fine-grained milled in alcohol. By hand pressing at various pressures, specimens of various compactness were obtained from each powder. The intensity of four lines of each specimen was measured in a URS-50I apparatus in  $\text{CoK}_\alpha$  radiation with an iron filter; the speed of rotation of the specimen was 0.5 deg/min, the speed of movement of the potentiometer strip was 600 mm/hour, the slit widths were 2, 1 and 0.5 mm. The results are shown in the table on p 795. The table data show that in the fine-grained unmilled powder the degree of compactness affects the intensity relatively little. In the coarse-grained and also in the alcohol-milled fine-grain powder the effect of compactness on intensity is considerable. Identical behaviour of such markedly different powders ✓

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On the Additional Weakening of X-ray Interferences in Powder Specimens

is possible, and is due to the formation in the fine-grained powder of conglomerates in which the rays become "entangled" in the same way as in large grains. The drop in intensity, as distinct from Wilchinsky's data, depends on the reflection angle, but this dependence is not a general one obtained for one particular specimen by McKeehan and Warren, but is accidental by nature. The present authors think that this conclusion is reliable, since the magnitudes of intensity oscillations, shown in the table, exceed the experimental error limit (5%) in the majority of cases. The presence of such chance intensity variations in relation to reflection angle and compactness makes the interpretation of the intensity of powder specimens unreliable. As can be seen from the data of the same table, variations of the dimensions of the physical half-width of the line in relation to compactness do not in practice exceed the limits of experimental error, i.e. the magnitude of the half-width of the line is independent of the compactness of the specimen.

Card  
3/4

24.7100

77121  
SOV/70-4-6-22/31

AUTHORS: Koval'skiy, A. Ye., Semenovskaya, S. V.

TITLE: Concerning the Molybdenum Monocarbide Structure.  
Brief Communication

PERIODICAL: Kristallografiya, 1959, Vol 4, Nr 6, pp 923-924 (USSR)

ABSTRACT: Of the five polymorphous molybdenum monocarbides known in the literature, four are hexagonal but occur in different space groups and have differing unit translations a and c; the fifth is face-centered cubic. The metastable molybdenum monocarbide whose space group is  $C_{6h}^{2/3} = P6_3/mmc$  could not up to now be produced pure. The authors accomplished this by hot pressing of the powdered mixture of 89% Mo + 11% C under 600, 500, and 200 kg/cm<sup>2</sup> pressure at 1,750 + 50°C for 30 min. X-ray diffraction data which are close to those reported by H. Nowotny, et al. (Z. Anorg. Chem., 267, 261-264, 1952), proved that specimens produced under 600 kg/cm<sup>2</sup> pressure consisted exclusively of the desired metastable

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Concerning the Molybdenum Monocarbide  
Structure. Brief Communication

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phase. Specimens produced under  $500 \text{ kg/cm}^2$  pressure had the diffraction lines of both the metastable monocarbide and  $\text{Mo}_2\text{C}$ . Specimens produced under  $200 \text{ kg/cm}^2$  pressure consisted largely of  $\text{Mo}_2\text{C}$ .  $\text{C}_{6h}$  phase disappeared in both cold hardened and undeformed specimens after annealing at  $750^\circ \text{C}$  for 90 min; only  $\text{Mo}_2\text{C}$  lines remained. There is 1 table; and 5 references, 3 German, 1 U.S., 1 U.K. The U.S. and U.K. references are: T.A. Wilson, Trans. Amer. Inst. Min. Met. Engineers, 117, 188, 1934; K. Kuo, G. Hägg, Nature, 170, 245-246, 1952.

ASSOCIATION: All-Union Scientific Research Institute of Hard Alloys  
(Vsesoyuznyy nauchno-issledovatel'skiy institut  
tverdykh splavov).

SUBMITTED: June 15, 1959  
Card 2/2



24(2) SOV/48-23-5-17/31  
AUTHORS: Semenovskaya, S. V., Umanskiy, Ya. S.  
TITLE: A Comparison of the Fundamental X-Ray Methods for the Determination of the Dimensions of the Mosaic Blocks in Polycrystalline Materials (Sopostavleniye osnovnykh rentgenovskikh metodov opredeleniya razmerov mozaichnykh blokov v polikristallicheskikh materialakh)  
PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1959, Vol 23, Nr 5, pp 620-623 (USSR)  
ABSTRACT: The first part of the present paper describes methods and results. The amplification of the last interference lines is measured for the determination of the grain sizes up to  $0.1 \mu$ , whereas the primary extinction of the interference lines is determined in the case of grain sizes of  $0.1 - 1 \mu$ . Formula (1) by Darwin is given, by which the weakening of the intensity of primary lines may be determined; the size of the structural grains and their quantity are computed in formulas (2) and (3). Sample dimensions and their pre-treatment, as well as the instrument employed for the experiments, are then described. In the thermal treatment importance was attached to the elimination of the tensions of the 2nd kind. A detailed description is then given of the method, in which the grain size may be determined by the aid of formula (1),  
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SOV/48-23-5-17/31

A Comparison of the Fundamental X-Ray Methods for the Determination of the Dimensions of the Mosaic Blocks in Polycrystalline Materials

the error being of 30-7%. Grain sizes of  $0.13 - 0.85 \mu$  were measured in this connection. The formula by Selyakov was applied in the determination of the grain sizes by the measurement of the amplification of the last interference lines. The grain sizes measured were of the magnitude of  $0.1 - 0.25 \mu$ . The second part of the present paper compares results obtained with different methods. Diagram (Fig 2) reveals that the error in the method by Darwin is lower in the grain size range of  $0.1 \mu$  and more, as compared to the method according to Selyakov. In the range of grain sizes smaller than  $0.1 \mu$ , Selyakov's method yields better results. It is further shown that the grain sizes obtained from the determination of interference line amplification are smaller as compared to those according to formulas (1), (2), and (3). A comparison is then made of the results obtained with the methods by Darwin, Wilchinsky and Beiss. A diagram depicts the experimental and computed values according to Darwin's method. There are 4 figures and 3 references, 1 of which is Soviet.

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KOVAL'SKIY, A.Ye.; SEMEOVSKAYA, S.V.

Changes in the X-ray pattern of tungsten monocarbide in  
hard alloys. Sbor. trud. VNITTS no.2:108-112 '60.  
(MIRA 15:2)

(Tungsten carbide)  
(X-ray crystallography)

S/137/62/000/002/037/144  
A006/A101

AUTHORS: Koval'skiy, A. Ye., Semenovskaya, S. V.

TITLE: Changes in the tungsten monocarbide radiograph in sintered carbides

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 2, 1962, 28, abstract 2G225  
("Sb. tr. Vses. n.-i. int tverdykh splavov", 1960, no. 2, 109-112)

TEXT: It is stressed that the magnitude of the intensity ratio of two adjacent interference lines of WC (110) and (002) on the surface of some WC-Co sintered carbide specimens, is considerably different from that of pure WC. It depends on a number of technological factors. The mentioned effect takes place in both intensified grinding and sintering of pure WC without addition of Co. The maximum magnitude of the aforementioned ratio (4.43) was also revealed on specimens of Ti-sintered carbide TI5K6. The nature and causes of the phenomenon observed have as yet not been revealed.

I. Brokhin

[Abstracter's note: Complete translation]

Card 1/1

S/126/61/012/002/018/019  
E032/E514

26566

18.9500  
15.2240  
AUTHORS:

Ivensen, V.A., Koval'skiy, A.Ye, Semenovskaya, S.V.  
and Eyduk, O.N.

TITLE:

On the anisotropy of the elastic properties of  
tungsten monocarbide

PERIODICAL: Fizika metallov i metallovedeniye, 1961, Vol.12, No.2,  
pp.299-300

TEXT:

In view of the difficulties in the production of  
single crystals of tungsten monocarbide and the determination of  
their properties, the present authors have investigated the  
anisotropy of its elastic properties using a single crystal of  
WC-Co (10 wt.% cobalt). It is known that reversible (i.e.elastic)  
thermal stresses occur in two-phase alloys as a result of  
differences in the thermal expansion coefficients of the two  
phases. In the present work the absolute magnitude of the  
stresses was measured using the YPC-50 (URS-50) diffractometer  
with Co K<sub>β</sub> radiation. The latter radiation was employed in  
order to exclude effects associated with the doublet structure of  
K<sub>α1α2</sub>. The displacement of the "centre of gravity" of the lines

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On the anisotropy of the elastic ...

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due to the specimen, relative to the lines due to a free specimen of tungsten carbide, was measured. In addition to this shift, a determination was made of the "structural" width of the  $\beta$  line due to the nonuniformity of the thermal stresses. The width of the lines obtained after the removal of the cobalt phase (by means of hydrochloric acid) was subtracted from the total width, since the removal of cobalt removes the thermal stresses. The subtraction was carried out with the aid of a linear formula. It was found that as the direction of the crystallographic plane approaches the c-axis, the elastic modulus increases. For example, the elastic modulus along the c-axis is greater than that along the a-axis by a factor of 1.5. Assuming a three-dimensional stress state, it is concluded that the tungsten carbide lattice in the alloy is compressed, which is in agreement with all the published models describing thermal stresses in the two-phase system (Ref.2: G. P. Zaytsev, FMM, 1956, 2, No.3, 494; Ref.3: W. Spath: Metall. 1958, No.10; Stahlbau, 1958, 24, No.3; Ref.5: J. Gurland, J. Trans. ASM., 1958, 50, 1063). The cobalt lattice, on the other hand, should be in a stretched state. It is pointed out, however, that

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the anisotropy may also be due to the fact that the thermal expansion coefficient is not the same in all directions. However, according to A. M. Belikov (Ref.10: Dissertation, MIS, 1958) the expansion coefficient along the a and c axes is in fact practically the same ( $3.84 \times 10^{-6}$  and  $3.90 \times 10^{-6}$ ). There are 1 table and 10 references: 7 Soviet and 3 non-Soviet.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut tverdykh splavov (All Union Scientific Research Institute for Hard Alloys)

SUBMITTED: March 11, 1961

X

Card 3/3

S/181/62/004/006/011/051  
B125/B104

AUTHORS: Semenovskaya, S. V., and Umanskiy, Ya. S.

TITLE: Radiographic determination of Focht's elastic constants and the transverse branches of the phonon spectrum for disordered substitution solid solutions with cubic structure

PERIODICAL: Fizika tverdogo tela, v. 4, no. 6, 1962, 1455 - 1465

TEXT: Focht's constants and the transverse branches of the phonon spectrum for disordered substitution solid solutions (8 at% Al in Cu) with cubic structure (face-centered, body-centered, or simply cubic) were determined by an isothermal method. After measuring the absolute intensity of the diffuse X-ray scattering for small wave vectors  $|\vec{k}|$  (that means, when the classical theory of elasticity can be applied), one obtains the frequency of the transverse branches of the phonon spectrum by using the formula for the intensity of thermal diffuse single-phonon scattering. The velocities of sound  $c_0^{(s)}$  in the different directions are obtained from four diffusion equations (two transverse branches for  $\vec{k}$  along  $\{110\}$  and one

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S/020/62/145/002/009/018  
39585  
B178/B104

24.7300

AUTHORS:

Semenovskaya, S. V., and Umanskiy, Ya. S.

TITLE:

Separate determination of dynamic and static distortions from weakening of the interference maxima of solid solutions in any phonon spectrum

PERIODICAL:

Akademiya nauk SSSR. Doklady, v. 145, no. 2, 1962, 312-314

TEXT: When solid solutions are formed or are thermally treated, their interference maxima are weakened by a change in the mean square displacement of the elastic atomic vibrations and by a static displacement of atoms:

$$I = I_0 \exp(-(L_{\text{dyn}} + L_{\text{stat}}));$$

$$L_{\text{dyn}} = \frac{16\pi^2 \sin^2 \theta}{3\lambda^2} \overline{u_{\text{dyn}}^2}; \quad L_{\text{stat}} = \frac{16\pi^2 \sin^2 \theta}{3\lambda^2} \overline{u_{\text{stat}}^2}$$

The quantities  $\overline{u_{\text{dyn}}^2}$  and  $\overline{u_{\text{stat}}^2}$  can be determined separately as  $\overline{u_{\text{dyn}}^2}$  is temperature-dependent whereas  $\overline{u_{\text{stat}}^2}$  is not. The quantity  $\overline{u_{\text{dyn}}^2}$  is

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Separate determination of dynamic...

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determined by

$$\overline{u}_{\text{dyn}}^2 = \frac{\hbar}{m} \int_0^{\infty} \left( \frac{1}{e^{\hbar\omega/kT} - 1} + \frac{1}{2} \right) \frac{g(\omega)}{\omega} d\omega, \quad (1),$$

where  $m$  is the effective atomic mass of the solid solution ( $\frac{1}{m} = \frac{c_1}{m_1} + \frac{c_2}{m_2}$ );  
 $g(\omega)d\omega$  is the number of vibrations of frequency  $\omega$ ;  $\int_0^{\infty} g(\omega)d\omega = 3$ . When

$\hbar\omega/kT < 2\pi$ , the function  $\frac{g(\omega)}{e^{\hbar\omega/kT} - 1}$  can be expanded in a Taylor series

$$\frac{\hbar\omega/kT}{e^{\hbar\omega/kT} - 1} = 1 - \frac{1}{2} \frac{\hbar\omega}{kT} + \frac{1}{12} \left( \frac{\hbar\omega}{kT} \right)^2 - \frac{1}{720} \left( \frac{\hbar\omega}{kT} \right)^4 + \dots \quad (3).$$

Substitution furnishes the expression

$$\overline{u}_{\text{dyn}}^2 = \frac{kT}{m} \int_0^{\infty} \frac{g(\omega)}{\omega^2} d\omega + \frac{\hbar^2}{4mkT}. \quad (4).$$

Then the mean square displacement is  $\overline{u}_{\text{tot}}^2 = \overline{u}_{\text{dyn}}^2 + \overline{u}_{\text{stat}}^2 = \frac{kT}{m} + \frac{\hbar^2}{4mkT} + \overline{u}_{\text{stat}}^2$ ,

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Separate determination of dynamic...

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B178/B104

where  $A = \int_0^{\infty} \frac{g(\omega)}{\omega^2} d\omega$  is temperature-independent. The static and thermal

displacements are determined graphically. The inclination of the resultant straight line determines  $A \frac{k}{m}$ . The quantity  $\bar{u}_{tot}^2$  can be found only by experiment and is temperature-dependent only at high temperatures. Below room temperature the term  $\frac{\hbar^2}{4mkT}$  has to be calculated since otherwise the error is 5 % even at room temperature. There is 1 table. ✓

ASSOCIATION: Moskovskiy institut stali (Moscow Steel Institute)

SUBMITTED: January 23, 1962

Card 3/3

ACCESSION NR: AP4028437

S/0181/64/006/004/1100/1103

AUTHORS: Semenovskaya, S. V.; Umanskiy, Ya. S.; Puzey, I. M.; Granovskiy, Ye. B.

TITLE: Investigating the phonon spectrum of nickel by diffuse scattering of x rays

SOURCE: Fizika tverdogo tela, v. 6, no. 4, 1964, 1100-1103

TOPIC TAGS: phonon, nickel, diffuse scattering, x ray, elastic wave, sound velocity, elastic constant, ferromagnetic property, multiphonon scattering, goniometer RKSO, ionizer URS 50 IM, counter MST 17

ABSTRACT: The authors determined the dependence of frequency on the wave vector for longitudinal and transverse waves propagated along the symmetry directions—[100], [110], and [111] at room temperature. The initial segments of the dispersion curves permit approximate determination of the velocity of sound. The velocities thus obtained agree with average values determined ultrasonically within 7% or less. The computed values of the elastic constants (in dynes/cm<sup>2</sup>)— $2.45 \cdot 10^{-12}$  for  $c_{11}$ ,  $1.6 \cdot 10^{-12}$  for  $c_{12}$ , and  $1.14 \cdot 10^{-12}$  for  $c_{44}$ —are in good agreement with data from the literature. The dispersion in Ni is found to be much

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ACCESSION NR: AP4028437

greater than in Al and Cu, as reported in the literature. This fact apparently derives from the ferromagnetic nature of Ni and is due to spin-phonon interaction. The authors note that the precision in measuring the phonon spectrum is related to the precision in determining multiphonon scattering, and they point out some sources of error in applying corrections for multiphonon scattering. The corrections have a higher degree of validity for Al than for Ni. Orig. art. has: 3 figures and 2 tables.

ASSOCIATION: Moskovskiy institut stali i splavov (Moscow Institute of Steel and Alloys)

SUBMITTED: 23Oct63

DATE ACQ: 27Apr64

ENCL: 00

SUB CODE: SS,MM

NO REF SOV: 001

OTHER: 010

Card

2/2

L 12935-65 EWA(k)/EWT(l)/EWT(m)/EEC(t)/EWP(t)/EWP(b) JD AS(mp)-2/  
AFWL/ESD(gs)/ESD(t)

ACCESSION NR: AP4046605

S/0181/64/006/010/2963/2971

AUTHORS: Semenovskaya, S. V.; Umanskiy, Ya. S.

TITLE: Concerning the contribution of many-phonon processes to the intensity of the diffuse scattering of x rays by a crystal lattice

SOURCE: Fizika tverdogo tela, v. 6, no. 10, 1964, 2963-2971

TOPIC TAGS: phonon, x ray crystallography, Brillouin zone, x ray scattering

ABSTRACT: In view of the existence of cases when the role of many-phonon processes cannot be neglected, for example in the case of substances having a low characteristic temperature and low atomic mass, or in the case of scattering close to the faces of the Brillouin zone in reciprocal space, the authors discuss the problem of separating from the total intensity of diffuse scattering the contribution due to many-phonon processes. An expression is derived for

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L 12935-65

ACCESSION NR: AP4046605

the intensity of many-phonon scattering, with account of the first three coordination spheres; this expression is valid for all orders and makes it possible to determine the contribution made to the intensity of the diffuse scattering of x-rays by a crystal lattice from many-phonon processes of all orders. The calculation is made on the basis of the same assumptions concerning the dispersion law and sound velocity as was made by C. B. Walker (Phys. Rev. v. 103, 547, 1956), whose method is claimed to involve computations that are too cumbersome for practical purposes. Orig. art. has: 20 formulas and 3 tables.

ASSOCIATION: Moskovskiy institut stali i splavov (Moscow Institute of Steel and Alloys)

SUBMITTED: 20Mar64

ENCL: 00

SUB CODE: SS

NR REF SOV: 002

OTHER: 006

Card 2/2

ACCESSION NR: AP4043837

S/0020/64/157/005/1103/1106

AUTHORS: Semenovskaya, S. V.; Umanskiy, Ya. S.

TITLE: Study of the phonon spectrum of a disordered solid solution with  $\text{Ni}_3\text{Fe}$  composition by the method of diffuse scattering of x rays

SOURCE: AN SSSR. Doklady\*, v. 157, no. 5, 1964, 1103-1106

TOPIC TAGS: x ray diffraction, Compton scattering, phonon scattering, solid solution, nickel alloy, ordered alloy, single crystal

ABSTRACT: A method for separating the scattering intensities connected with static and thermal atom shifts, and permitting separation of scattering intensity by the transverse branches of the phonon spectrum in true form, was developed by the authors previously (FTT, v. 4, no. 6, 1455, 1962). This method is employed in the present research to investigate the phonon spectra in a disordered  $\text{Ni}_3\text{Fe}$  solid solution with stoichiometric composition, for which an x-ray

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ACCESSION NR: AP4043837

diffraction determination of the vibration frequencies in solid solution is possible. A single crystal was investigated, obtained by slow cooling from the melt. The method of preparing the sample is described. The investigation was made in a URS-50-IN ionization installation using cobalt-K $\alpha$  emission, monochromatized by a cylindrical bent pentaerythrite crystal. The intensity of diffuse scattering was measured around the sites (200), (220) and (222) in the symmetry directions [100], [110], and [111]. The measured intensity was converted into absolute units by comparison with large-angle scattering from amorphous quartz. Corrections were made for Compton and two-phonon scattering, and for anomalous dispersion. The elastic constants of the single crystal of disordered Ni<sub>3</sub>Fe solid solution, determined from the obtained spectrum, agree with each other within 5--7%, and have values  $C_{11} = 2.44$ ,  $C_{12} = 1.6$  and  $C_{44} = 1.02$  (all in units of  $10^{12}$  dyne/cm<sup>2</sup>). The singularities noted on the spectral curves are attributed to the influence of the near

Cord 2/4

ACCESSION NR: AP4043837

order on the phonon spectrum. This report was presented by G. V. Kudryumov. Orig. art. has: 1 figure and 3 formulas.

ASSOCIATION: Moskovskiy institut stali i splavov (Moscow Institute of Steel and Alloys)

SUBMITTED: 26Mar64

ENCL: 01

SUB CODE: NP, MM

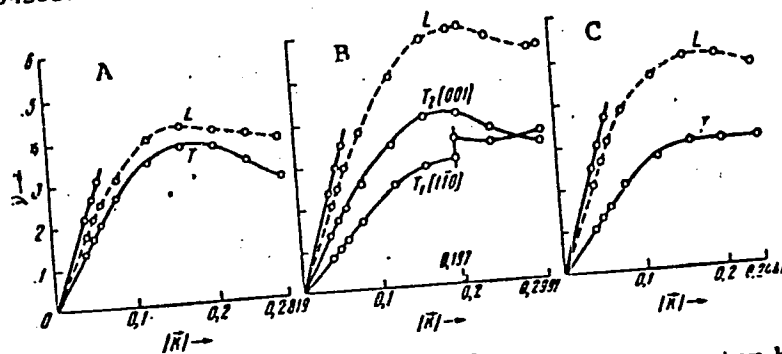
NR REF SOV: 008

OTHER: 007

Cord 3/4

ENCLOSURE: 01

ACCESSION NR: AP4043837



Dependence of the frequency  $\nu$  (in  $10^{12} \text{ sec}^{-1}$ ) on the wave vector  $k$  (in  $10^8 \text{ kX}$ ) for longitudinal waves (L) without account of scattering by static inhomogeneities) and transverse waves (T): A - waves propagating along the [100] direction; B - waves propagating along the [110] direction (with polarizations [110] and [001]); C - waves propagating along the [111] direction.

Card 4/4

L 5399-66 EWA(k)/EWA(c)/EWT(l)/EWT(m)/EWP(b)/T/EWP(t) JD/LHB

ACC NR: AP5027404

SOURCE CODE: UR/0181/65/007/011/3270/3277

AUTHOR: Semenovskaya, S. V.; Khachaturyan, A. G. 44.55

ORG: Central Scientific Research Institute of Ferrous Metallurgy, Moscow  
(Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii im. M. P. Bardina) 44.55 30 B

TITLE: On the feasibility of simultaneously accounting for the effects of static distortions, short-range order and thermal vibrations of atoms in the diffuse scattering of x-rays by polycrystalline substitutional solid solutions

SOURCE: Fizika tverdogo tela, v. 7, no. 11, 1965, 3270-3277 21.44.55

TOPIC TAGS: x ray scattering, polycrystal, solid solution

ABSTRACT: A method is proposed for finding short-range order parameters from measurements of diffuse scattering of x-rays by polycrystals of substitutional binary solid solutions. This method may be used for determining short-range order parameters in the case where static distortions due to differences in atomic geometric dimensions (dimensional effect), and thermal vibrations of atoms contribute to diffuse scattering. Orig. art. has: 20 formulas. 18

SUB CODE: SS/  
Card 1/1

SUBM DATE: 23May65/

ORIG REF: 006/

OTH REF: 004

070 1337

L 31164-66 ENT( )/T/EWP( ) IJP( ) HW/JD

ACC NR: AP6006815

SOURCE CODE: UR/0191/66/008/002/0366/0374

AUTHOR: Semenovskaya, S. V.; Umanskiy, Ya. S.

ORG: Moscow Institute of Steel and Alloys (Moskovskiy institut stali i splavov)

TITLE: Separation of the effects which dynamic and static nonhomogeneities have on diffuse scattering of x-rays by single crystals of disordered solid solutions

SOURCE: Fizika tverdogo tela, v. 8, no. 2, 1966, 366-374

TOPIC TAGS: single crystal, solid solution, x ray scattering, phonon spectrum

ABSTRACT: A method is proposed for using diffuse scattering of x-rays to determine the complete spectrum of phonon frequencies in disordered solid solutions. An expression is derived for the mean square amplitude of the fluctuation wave in terms of the chemical activities of the components in the solid solution. This formula may be used with various wave vectors for finding the correlation functions for parameters of short-range order for any number of coordination spheres. The coefficients in the formulas are determined from data of an independent thermodynamic experiment. The method makes it possible to isolate the contributions due to sta-

Card 1/2

L 31164-66

ACC NR: AP6006815

tic and dynamic nonhomogeneities in the total diffuse scattering of x-rays. The method is illustrated by calculating the total spectrum of phonon frequencies in a disordered solid solution of stoichiometric  $\text{Ni}_3\text{Fe}$  quenched in water from  $600^\circ\text{C}$  for three directions:  $[100]$ ,  $[110]$  and  $[111]$ . Dispersion curves are given for longitudinal and transverse waves propagating in these three directions in this alloy. These curves are analyzed and compared with the frequency spectrum for pure nickel. Orig. art. has: 5 figures, 1 table, 16 formulas. 44, 16 52-7

SUB CODE: 20/

SUBM DATE: 28Jun65/

ORIG REF: 007/

OTH REF: 008

Card 2/2 *LC*

SOV/80-59-1-30/44

AUTHORS: Yelovich, S.Yu., Zhabrova, G.H., Krivankova, P.G. and Semenovskaya, T.D.

TITLE: Hydrogenation of Fats in Foam (Gidrogenizatsiya zhirov v pene)

PERIODICAL: Zhurnal prikladnoy khimii, 1959, Nr 1, pp 187-193 (USSR)

ABSTRACT: The authors employed the method of hydrogenation of fats in foam which proved already to yield satisfactory results [Ref. 1 to 4]. The present paper describes the results of the hydrogenation of cotton oil in the foam which is formed during the passing of hydrogen through the porous partitions in Schott's filters. This technique leads to a very selective course of the process. The ratio of the hydrogenation rate of olein radicals to that of the saturation of linoleic radicals is equal to 0.01 to 0.04. The analysis of experimental data leads to the conclusion that the foam process proceeded in the kinetic region by all the components of the heterogeneous reaction of catalytic hydration. The electro-microscopic investigation, carried out by I.I. Tret'yakov and I.A. Bespalova, of the nickel catalyzer obtained from the nickel formate and used in the experiments, leads to the conclusion that the prevailing dimensions of the particles are

Card 1/2

SOV/80-59-1-3C/44

Hydrogenation of Fats in Foam

0.1 to 0.2 microns.

There are 4 graphs, 1 diagram, 1 microphoto, 3 tables and

8 Soviet references.

SUBMITTED: April 3, 1957

Card 2/2



YELOVICH, S.Yu., doktor khim.nauk; SEME NOVSKAYA, T.D., GEYSHINA, K.V., inzh.

Hydrogenation in the foam state and selectivity. Masl.-zhir.prom.  
26 no.5:14-17 My '60.  
(MIRA 13:12)

1. Institut fizicheskoy khimii AN SSSR (for Yelovich, Semenovskaya).
2. TSentral'naya nauchno-issledovatel'skaya laboratoriya zhirovoy promyshlennosti Mosgorsovnarkhoza (for Geyshina).  
(Oils and fats) (Hydrogenation)

AVGUL', V.T.; YELOVICH, S.Yu. [deceased]; SEMENOVSKAYA, T.D.; CHMUTOV, K.V.  
(Moskva)

Chromatographic column for the operation at high temperatures. Zhur.  
fiz. khim. 35 no. 4:946-947 Ap '61. (MIRA 14:5)

1. Akademiya nauk SSSR, Institut fizicheskoy khimii.  
(Chromatographic analysis)

YELOVICH, S. Yu. [deceased]; SEMENOVSKAYA, T.D. (Moscow)

Specific catalytic activity of nickel catalysis in the hydro-  
genation of fats. Zhur. fiz. khim. 36 no.6:1255-1260 Je'62  
(MIRA 17:7)

1. Institut fizicheskoy khimii AN SSSR.

YELOVICH, S.Yu. (Moskva) [deceased]; AVGUL', V.T. (Moskva); SEMENOVSKAYA, T.D.  
(Moskva)

Device for determining isotherms of sorption from solutions at  
temperatures above 100°. Zhur.fiz.khim. 37 no.8:1909 Ag '63.  
(MIRA 16:9)

1. Institut fizicheskoy khimii AN SSSR.  
(Sorption)

SEMENOVSKAYA, T.D.; AVGUL', V.T.; CHMUTOV, K.V.

Liquid chromatography at high temperatures. Zhur. fiz. khim.  
37 no.5:1160-1162 My '63. (MIRA 17:1)

1. Institut fizicheskoy khimii AN SSSR.

L 40708-65 EWT(m)/EWG(m) RM/RWH

ACCESSION NR: AP5012314

UR/0076/64/038/010/2520/2522

AUTHOR: Semenovskaya, T. D.; Avgul'v, V. T.; Chmutov, K. V.

TITLE: Influence of temperature of the shape of the front in ion-exchange chromatography

SOURCE: Zhurnal fizicheskoy khimii, v. 38, no. 10, 1964, 2520-2522

TOPIC TAGS: ion exchange chromatography, high temperature research, high temperature effect

ABSTRACT: In frontal ion-exchange chromatography at high temperatures, there is a substantial sharpening of the front with increasing temperature, which in turn provides the possibility of increasing the rate of the chromatographic processes. The diffusion coefficients of the  $Ni^{+2}$  ion in the grain of the resin KU-2 were calculated from the experimental effluent curves according to the Glueckauf equation for a stationary self-sharpening front. The role of the diffusion and hydrodynamic factors in the formation of the front at the temperatures 35, 90, and 180°C was demonstrated on the basis of the calculation: the diffusion rate exerts an appreciable influence on the shape of the front only at 35°C, the blurring of the front related to diffusion in the resin drops sharply as the temperature is raised to 180°C. However, the relative role of hydrodynamic

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L 40708-65

ACCESSION NR: AP5012314

factors not considered in the Glueckauf equation is magnified, which may lead to substantial deviations of the diffusion coefficients in the resin, calculated according to the experimental effluent curves, from their actual values. Orig. art. has: 7 formulas, 1 graph and 1 table.

ASSOCIATION: Akademiya nauk SSSR, Institut fizicheskoy khimii (Academy of Sciences SSSR, Institute of Physical Chemistry)

SUBMITTED: 01Apr64

ENCL: 00

SUB CODE: GC, TD

NO REF SOV: 001

OTHER: 003

JPRS

Card 2/2 MB

SEMEŇOVSKAYA, T.D.; AVGUL', V.T.; CHMUTOV, K.V.

Effect of temperature on the form of the front in ion-exchange chromatography. Zhur. fiz. khim. 38 no.10:2520-2522 G '64.  
(MIRA 18:2)

1. Institut fizicheskoy khimii AN SSSR.



SHAKHOVA, Z.F.; SEMENOVSKAYA, Ye.N.

Thermogravimetry and its use in analytic chemistry. Zav. lab.  
22 no.12:1430-1435 '56. (MLRA 10:2)

(Chemistry, Analytical)  
(Scales (Weighing instruments))

SHAKHOVA, Z.F.; SEMENOVSKAYA, Ye.N.

Synthesis of titanomolybdic heteropolyacid. Zhur.neorg.khim.  
7 no.5:1084-1086 My '62. (MIRA 15:7)  
(Molybdic acids) (Titanic acids)

SHAKHOVA, Z.F.; SEME NOVSKAYA, Ye.N.; TIMOFEYEV A, Ye.N.

Addition products of some organic bases to zirconomolybdic  
heteropolyacid. Vest.Mosk. un. Ser.2:khim. 17 no.1:55-59 Ja-F  
'62. (MIRA 15:1)

1. Moskovskiy gosudarstvennyy universitet, kafedra analiticheskoy  
khimii.

(Zirconomolybdates)

SEMENOVSKAYA, E. N. and KRAVKOV, S. V.

"Effect of Illumination of One Eye on the Luminous Sensibility of the Other",  
Zritelnie Oshtchushtenia i Vostpriatia, (Visual Sensation and Freception", 1935.

SEMEOVSKAYA, E. N.

"Increase of Sensibility to the Eye by Red Light", Zritelnie Oshtchushtchenia  
i Vospriatia, 1935.

SEME NOVSKAYA, E. N. and KRAVKOV, S. V.

"Problems Concerning the Effect of Prolonged Fasting on the Functions of the Eye", Zritel'nyi Oshushtcheniia i Vospriiatia, 1935.

1ST AND 2ND CODES		3RD AND 4TH CODES	
PROCESSING AND PROPERTY INDEX			
SEMENOVSKAYA, Ye. N.			
<p>Contrast sensitivity of central vision as affected by preliminary light adaptation of different areas of retina. S. V. Kravkov and E. N. Semenovskaya. (Compt. rend. Acad. Sci. U.R.S.S., 1944, 48, 318-320). The contrast sensitivity of central vision was measured after complete dark adaptation, and the effect of additional lighting (0-1 lux white or 4 lux red) noted. Macular dark adaptation is somewhat improved by the former, and macular contrast sensitivity by the latter; the optimal duration of the previous exposure to extra light is 1-3 min. The improvements are about 2-fold and last 16-40 min. Scotopic vision is adversely affected by previous illumination.</p> <p>K. J. W. C.</p>			
ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION			
SECTION SYMBOLS		SECTION SYMBOLS	
1ST AND 2ND CODES		3RD AND 4TH CODES	
1ST AND 2ND CODES		3RD AND 4TH CODES	

SEMENOVSKAYA, Ye. N. and Struchkov, M. I.

"The Problem of the Functional Mobility (Lability) of the Optical Analyzer,"  
Dokl. AN SSSR, 59, No.7, 1948

Dept. Physiological Optics, Central Inst. Ophthalmology im. Gel'mgolts



SEMENOVSKAYA, E. N. and STRUCHKOV, M. I.

"Functional Mobility (Lability) of the Visual Analyzer. "

Problemy Fiziologicheskoi optiki 7: 25-33, 1949.

Trans: NIH

SELENOVSKAYA, Ye. M.

24302

SELENOVSKAYA, Ye. M. Rozrastayye izmeneniya funktsional'noy podvizhnosti (labil'nosti) zritel'nogo analizatora. Problemy fiziol. optiki, T. VII, 1948, S. 34-38. - Bibliogr: 7 nazv.

SO: Letopis, No. 32, 1949.

SEMENOVSKAYA, E. N. and VERKHUTINA, A. I.

"Age-Linked Changes in the Functional Mobility (Lability) of the Visual Analyzer."

Problemy Fiziologicheskoi optiki 7: 34-38, 1949.

Trans: NIH

PA 46/49T57

SEME NOVSKAYA, Ye. N.

USSR/Medicine - Eyes  
Medicine - Vision, Physiology

Jun 49

"State of Functional Mobility (Lability) of the Visual Analyzer in Darkness and in Light," Ye. N. Semenovskaya, M. I. Struchkov, Dept of Physiol Opt, Gen Inst of Ophthalmol iment Gel'mgol'ts, 4 pp

"Dok Ak Nauk SSSR" Vol LXVI, No 4

Studies period of relative unexcitability of visual analyzer and period for which instantaneous phosphene is retained. Experiments show that functional mobility of visual apparatus drops not from darkness itself, but from the sleepy condition of the person

46/49T57

USSR/Medicine - Eyes (Contd)

Jun 49

under test. Additional experiments with chloral hydrate show that under influence of this narcotic, excitability and lability of visual analyzer are reduced in both light and darkness. Submitted by Acad K. M. Bykov, 8 Apr 49.

46/49T57

PA 2/50T85

SEME NOVSKAYA, Ye. N.

USSR/Medicine - Light, Effects  
Eye, Sensitivity Sep 49

"Change in the Functional Mobility (Lability)  
of the Vision Analyzer Under the Influence of  
the Electrotomography Conditions of Light and  
Dark Eye Adaptation," Ye. N. Semenovskaya, Div  
of Physiol Opt, Cen Inst of Ophthalmol Imeni  
Gel'mgol'ts, 4 pp

"Dok Ak Nauk SSSR" Vol LXVIII, No 1

In first series of experiments, eye was adapted  
to a white screen of 100 luxes for 30-40 minutes  
Threshold of electric sensitivity and critical

2/50T85

USSR/Medicine - Light, Effects  
Eye, Sensitivity (Contd) Sep 49

frequency (frequency of square-wave pulses at  
which electrical phosphene disappears) were  
measured several times. Polarizer was then  
switched on for 30 minutes. These two indexes  
were measured again 10-20 minutes after polarizer  
was switched off. Second series was conducted  
in dark in same fashion.

2/50T85

SEMENOVSKAYA, Ye. N.; KONDORSKAYA, I.L.

Distorted reactions of the visual analyzor to stimulation of the eyes with red light; effect of instillation of adrenalin on electric sensitivity and lability of the visual analyzor in red and green lights. Probl. fiziol. opt. no.10:63-66 '52. (MLRA 7:11)

1. Otdeleniye fiziologicheskoy optiki Gos. nauchno-issl. in-ta glaznykh bolezney im. Gel'mgol'tsa. Zav. otdeleniyem chl.-korr. AN i AMN SSSR prof. S.V.Kravkov [deceased]

(COLOR VISION,

eff. of epinephrine on electric sensitivity & lability in red & green lights)

(EPINEPHRINE, effects,

on color vision, electric sensitivity & lability in red & green lights)

SEMENOVSKAYA, Ye.N.; LIKHTENBAUM, L.L.

Daily function modification of lability and electrical sensitivity  
of the visual analyser. Probl. fiziol. opt. no.10:93-96 '52.

(MLRA 7:11)

1. Otdeleniye fiziologicheskoy optiki Gos. nauchn. issl. instituta  
glaznykh bolezney im. Gel'mgol'tsa. Zav. otdeleniyem chl.-korr.  
AN i AMN SSSR prof. S.V.Kravkov [deceased]

(EYE, physiology,

daily periodicity of lability & electrical sensitivity)

(PERIODICITY,

daily variations of visual lability & electrical  
sensitivity)

SEMENOVSKAYA, E. N. and STRUCHKOV, M. I.

"The State of Functional Mobility of the Visual analysors in Darkness and in Light".

Probl. Fiziol. Optiki, No. 8, pp 265-271, 1953.

In connections of dark adaptation the critical frequency of the loss of rhythmic phosphene (caused by a current three times higher than threshold voltage) is higher than in light adaptation. In dark adaptation the duration of retention of the blinking phosphene, which under otherwise equal conditions is lower the higher the frequency of irritation, is also increased. From these and other data, the authors have concluded that the functional mobility of the visual analysors is increased in dark adaptation as compared with light adaptation. The dependence of the critical frequency of loss of phosphene on the duration of the irritating current and on the intervals between stimuli both in darkness and in light were also investigated. It was shown in addition that during the sleep inhibition following the administration of chloral hydrate, and also during the exposure of the foveal field to red light, both the electrical excitability and the critical frequency of the rhythmic phosphene are decreased. (RZhBiol, No. 10, 1955)

SO: Sum No 884, 9 Apr 1956



SELENIOVSKAYA, Ye.H. Doc Biol Sci (diss) "On the functional  
mobility (lability) of the optic analyser in its normal and ~~in~~  
*certains* ~~some~~ pathologic states in man." Mos, 1955. 24 pp 22 cm.

(Acad Med Sci) 120 copies

(KL, 11-57, 97)

Category : USSR/Optics - Physiological Optics

K-9

Abs Jour : Ref Zhur - Fizika, No 2, 1957, No 5313

Author : Ivanov, B.T., Semenovskaya, Ye. N., Gol'tsman, N.I.

Inst : NIKFI, USSR

Title : Investigations in the Sphere of Perception of Stereoscopic Images

Orig Pub : Probl. fiziol. optiki, 1955, 11, 70-83

Abstract : An investigation of the perception of stereoscopic images was carried out in a specially-constructed stereoscope, where it was possible to change both the degree of illumination of the right and left images, as well as the degree of their separation, and also using a reticulated screen for spectacle-less stereoscopic projection of motion picture frames and test patterns. In the perception of stereoscopic pictures the observer should assume a definite position of the body and of the head, so as not to leave the optimum observation zone and so as not to lose the spatial placement of the object. This causes a strain in the muscles and considerable fatigue of vision. The fatigue was investigated with the following methods: by measuring the electric sensitivity and stability of the optical analyzer in their comparisons, the

Card : 1/2

Category : USSR/Optics - Physiological Optics

K-9

Abstr Jour : Ref Zhur - Fizika, No 2, 1957, No 5313

instability of clear vision, and the muscle balance of the eye. Comparison of the directions in the change in the instability and excitability made it possible to judge the phase changes in the state of the central nervous system even before the occurrence of fatigue. The most important factor in the fatigue, in addition to the one mentioned above, is the insufficient degree of separation of the right and left images. Depth perception turned out to be a very stable quantity and was disturbed only when one of the eyes is quite heavily darkened and when the quality of the separation was poor. The following recommendations are made: the unevenness in the illumination of the two eyes must not exceed 30%, the purity of separation must not be lower than 92 -- 95%. Bibliography, 12 titles.

Card : 2/2

EXCERPTA MEDICA Sec.12 Vol.12/5 Ophthalmology May 58

*SEMENOVSKAYA, E.N.*

852. THE ELECTRICAL ACTIVITY OF THE CEREBRAL CORTEX AND THE INSTABILITY OF THE 'OPTICAL ANALYSOR' IN TWO PATIENTS WITH GLAUCOMA (Russian text) - Semenovskaya E. N. and Bakholdina L. P. - SBORN. INFORM. - METOD. MATERIAL. INST. 1956, 4 (42-47)

Two patients with the juvenile form of glaucoma were investigated. In both there was calcification of the pineal gland. Marked lowering of electrical sensitivity and instability were observed. The presence of 'spike' waves in the subcortical areas of the brain indicated the presence of a state of excitation in these areas. (S)

*Семеновская, Ye. N.*  
ZHDANOV, V.K.; SEMENOVSKAYA, Ye.N.

Human electroencephalogram recorded during stimulation of the eyes  
by square electric pulses [with summary in English]. Biofizika 2  
no.6:724-733 '57. (MIRA 10:12)

1. Gosudarstvennyy nauchno-issledovatel'skiy institut glaznykh  
bolezney im. Gel'mgol'tsa, Moskva.  
(ELECTROENCEPHALOGRAPHY)(EYE)

BELOSTOTSKIY, Ye.M., GOL'TSMAN, N.I., SEMENOVSKAYA, Ye.N.

Space perception in stereoscopic cinematography. Probl.fiziol.opt.  
12:255-265 '58 (MIRA 11:6)

1. Stereolaboratoriya Vsesoyuznogo nauchno-issledovatel'skogo  
kino-fotoinstituta i Laboratoriya fiziologicheskoy optiki im. prof.  
S.V. Kravkova Gosudarstvennogo nauchno-issledovatel'skogo instituta  
glaznykh bolezney im. Gel'mgol'tsa.  
(VISION)

SEMENOVSKAYA, Ye.N., ZARETSKAYA, R.B.

Perception of the rhythm of intermittent light stimulations by the  
retina and the cerebral cortex. Probl.fiziol.opt. 12:377-387 '58  
(MIRA 11:6)

1. Laboratoriya fiziologicheskoy optiki im. S.V. Kravkova Gosudarstven-  
nogo nauchno-issledovatel'skogo instituta glaznykh bolezney im. Gel'm-  
gol'tsa..

(GLAUCOMA)

(ELECTROENCEPHALOGRAPHY)

(ELECTRORETINOGRAPHY)

GURTOVOY, Georgiy Konstantinovich; SEMENOVSKAYA, Ye.N., otv.red.;  
VYAZEMTSEVA, V.N., red.izd-va; BRUZGUL', V.V., tekhn.red.

[Eyes and vision] Glaz i zrenie. Moskva, Izd-vo Akad.nauk  
SSSR, 1959. 93 p. (MIRA 13:6)  
(Eye)



BOGOSLOVSKIY, A.I.; SEMENOVSKAYA, Ye.N.

Conditioned changes in the human electroretinogram. Biul. eksp. biol.  
1 med. 47 no.3:3-7 Mr '59. (MIRA 12:7)

1. Iz laboratorii fiziologicheskoy optiki imeni S.V. Kravkova (rukovoditel'-kandidat med. nauk A.V. Roslavytsev) Gosudarstvennogo nauchno-issledovatel'skogo instituta glaznykh bolezney imeni Gel'mgol'tsa (dir. - kandidat med. nauk A.V. Roslavytsev), Moskva. Predstavlena deystvitel'nykh chlenom AMN SSSR V.V. Parinym.

(REFLEX, CONDITIONED

conditioned changes of human electroretinogram (Rus))  
(RETINA, physiol.  
same)

SEMEHOVSKAYA, Ye. N.; BOGOSLOVSKIY, A.I.; KHVOLES, G. Ya.

Share of the cortex, the subcortex, and the retina in the act of human conditioned response reproduction of light rhythm [with summary in English]. Vop. psikhol. 6 no.1:99-113 Ja-F '60.

1. Laboratoriya fiziologicheskoy optiki im.S.V. Kravkova Gosudarstvennogo nauchno-issledovatel'skogo instituta glaznykh bolezney im. Gel'mgol'tsa.

(CONDITIONED RESPONSE) (ELECTROPHYSIOLOGY) (CEREBRAL CORTEX)

BOGOSLOVSKIY, A.I.; SEMENOVSKAYA, Ye.N.

Electroretinogram and its clinical significance; survey of foreign  
literature. Vest. oft. 73 no. 5:44-54 S-O '60. (MIRA 14:1)  
(ELECTRORETINOGRAPHY)

ZHDANOV, V.K.; BOGOSLOVSKIY, A.I.; SEMENOVSKAYA, Ye.N.

Electronic low-frequency analyzer and its use in electroretinography.  
Biul. eksp; biol. i med. 51 no.5:121-124 My '61. (MIRA 14:8)

1. Iz laboratorii fiziologicheskoy optiki imeni S.V.Kravkova  
(rukovoditel' A.V.Roslavtsev) Nauchno-issledovatel'skogo instituta  
glaznykh bolezney imeni Gel'mgol'tsa (dir. A.V.Roslavtsev), Moskva.  
Predstavlena deystvitel'nym chlenom AMN SSSR V.V.Parinyam.  
(ELECTRORETINOGRAPHY--EQUIPMENT AND SUPPLIES)

SEMENOVSKAYA, Ye.N., doktor biolog.nauk; KHVATOVA, A.V., kand.med.nauk

Electrooculography in strabismus. Uch.zap. GHI glaz.bol. no.7:  
41-47 '62. (MIRA 16:5)

1. Iz laboratorii fiziologicheskoy optiki i travmatologicheskogo  
otdeleniya Gosudarstvennogo nauchno-issledovatel'skogo instituta  
glaznykh bolezney imeni Gel'mgol'tsa.  
(STRABISMUS) (ELECTROPHYSIOLOGY)

BOGOSLOVSKIY, A.I.; SEMENOVSKAYA, Ye.N.; ZHDANOV, V.R.

Retina potential induced by electric current (ERRC). Biofizika  
9 no.6:701-709 '64. (MIRA 18:7)

1. Gosudarstvennyy nauchno-issledovatel'skiy institut glaznykh  
bolezney imeni Gel'mgol'tsa, Moskva.

SEMENOVSKAYA, Ye.N.

Electroretinography and profound electrophysiological studies  
of the human eye; clinical application. Trudy LIETIN no.13:174-  
209 '64. (MIRA 18:12)

37 71 100 100 100 100  
BUDYUK, V.P.; YEFIMOV, A.L.; BLINKOVA, M.V., kand. sel'skokhozyaystvennykh nauk, starshiy agronom; SECHENOVSKIY, A.A., red.; MOROZOV, D.N., red.; PAVLOVA, M.M., tekhn. red.; FEDOTOVA, A.F., tekhn. red.

[Corn in 1955] Kukuruza v 1955 godu. Moskva, Gos. izd-vo sel'khoz. lit-ry. No.1. [Non-Chernozem region] Nechernozemnaya zona. 1956. 366 p. No.2. [Districts of the Central Black Earth region and the Volga region] Raiony tsentral'no-chernozemnoi zony i Povolzh'ya. (MIRA 11:9) 1956. 263 p.

1. Glavnoye upravleniye sel'skokhozyaystvennoy nauki Ministerstva sel'skogo khozyaystva SSSR (for Blinkova).  
(Corn (Maize))



SEMEŇOVSKIY, H. H.

SMIRNOV, Aleksandr Ivanovich, prof.; SEMENOVSKIY, A.A., red.; BAILOD, A.I.,  
tekhn. red.

[Agriculture in Canada] Sel'skoe khoziaistvo Kanady. Moskva, Gos.  
izd-vo sel'khoz. lit-ry, 1958. 294 p. (MIRA 11:7)  
(Canada--Agriculture)

CHERNYAKOV, G.S., inzh., SEMENOVSKIY, A.A., inzh.

New requirements concerning the precision of topographic and  
geodetic work in surveying highways. Avt. dor. 21 no. 7:12 J1 '58.  
(MIRA 11:8)

(Roads--Surveying)

MOROZ, I.P., inzh.; SEMENOVSKIY, A.A., inzh.

Conference on designing highways. Art. dor. 23 no. 12:20-21  
D '60. (MIRA 13:12)

(Roads--Design)

GARASEVICH, G.I.; SEME NOVSKIY, A.A.

Automatic device for stacking dimensions into packages. Bum.i  
der.prom. no.4:3-5 O-D '62. (MIRA 15:12)

1. Kiyevskiy domostroitel'nyy fanernyy kombinat.  
(Woodworking industries) (Assembly-line methods)

MOROZ, I.P., inzh.; SEMENOVSKIY, A.A., inzh.

Manual with a low technical level. Avt. dor. 26 no.6:32  
Je '63. (MIRA 16:8)

(Roads--Surveying)

GARASEVICH, G.I.; SEMENOVSKIY, A.A.

Mechanization of the production of veneer. Bum. i der. prom. no.2:9-12  
Ap-Je '63. (MIRA 17:2)

1. Kiyevskiy derevoobrabatyvayushchiy kombinat.

GARASEVICH, G.I.; SEMENOVSKIY, A.A.

Manufacture of chairs from new materials. Bum. i der. prom. no.1:  
22-24 Ja-Mr '64. (MIRA 17:6)

SEMENOVSKIY, A.A.

Attachment to a two-saw cutting unit. Bum.  $\pm$  der. prom. no.2:10  
Ap-Je '64. (MIRA 17:9)



MENZHERITSKIY, A.I.; OSIPOV, A.V.; YEFREMOV, M.D.; KRUKOVSKIY, Ye.V.;  
SHLUGER, N.A.; REPSHIL', A.P.; MITSKEVICH, V.M.; MIKIRTUCHEVA,  
Z.V.; POLONSKIY, V.V.; OBOTOVA, M.N.; SEMENOVSKIY, A.A.;  
GARASEVICH, G.I.; VAYNBERG, Ye.I.; DOMNICH, A.M.; LEVCHENKO, V.L.;  
RAFAL'SON, V.D.; ROMANENKO, Ye.I.; SHPINER, Ye.I.; TEKLIN, V.G.

Innovations. Bum. 1 der. prom. no.2:58 Ap-Je '65.

(MIRA 18:6)

LOSEV, V.D. [Losiev, V.D.]; SEMENOVSKIY, A.G. [Semanova'ki, A.H.]

Device for checking trigger circuits. Zbir. prats' z obchys.  
mat. i tekhn. 2:111-113 '61. (MIRA 15:2)  
(Pulse circuits--Testing)

L 17598-66 EWT(a)/T/EWP(1) IJP(c) GG/BB/JXT(JP)/GS  
ACC NR: AT6005577 SOURCE CODE: UR/0000/65/000/000/0184/0207

AUTHOR: Barashko, A. S.; Kovalevskiy, V. A.; Mazyra, Yu. S.; Netrebenko, K. A.;  
Semenovskiy, A. G.

ORG: none

1644  
61  
8+1  
TITLE: The correlation reading automaton with a shifting register (ChARS)

SOURCE: AN UkrSSR. Chitayushchiye avtomaty i raspoznavaniye obrazov (Reading devices and pattern recognition). Kiev, Naukova dumka, 1965, 184-207

TOPIC TAGS: pattern recognition, data processing, data correlation, automaton, reading machine

ABSTRACT: The authors developed a reading automaton with a shifting register (ChARS) which they subsequently tested in several tube or transistorized versions. The device can process no less than 200 bits/sec, and error probability is no more than 0.01%. The device requires some 2500 parts. The article describes the appropriate algorithm, principles for the engineering realization of this algorithm, the photoelectric component

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ACC NR: AT6005577

and the mechanism for pattern advance, the shifting register, the standard-containing block, the extremum indication block, and the control unit. General tests were carried out in conjunction with the Kiev computer. The experimental model is now being used for the accumulation of statistical data needed for the determination of recognition reliability. The results are printed on the AEPU-45 electric typewriter. Orig. art. has: 16 formulas, 12 figures, and 1 table. [08]

SUB CODE: 09 / SUBM DATE: 3Aug65 / ORIG REF: 005 / ATD PRESS: 4011

Card 2/2    nst

L 27670-66 EWT(d)/T/EWP(1) IJP(c) GG/BB/JXT(BF)/GD

ACC NR: AT6005579

SOURCE CODE: UR/0000/65/000/000/0234/0244

AUTHOR: Semenovskiy, A. G.

53

B+1

ORG: none

160

TITLE: Recognition of longhand-written characters by means of a tracking scanner

SOURCE: AN UkrSSR. Chitayushchiye avtomaty i raspoznavaniye obrazov (Reading devices and pattern recognition). Kiev, Naukova dumka, 1965, 234-244

TOPIC TAGS: pattern recognition, character recognition, automatic reader

ABSTRACT: An algorithm, block diagrams, and some experimental results are reported of a new hand-written character reader. The algorithm uses some indicants, each of which denotes a definite sequence of directions in circuiting the character outline within a fixed part of a rectangle circumscribed around the character. The principal block diagram includes a photoelectric tracking system which moves the beam of an electron-ray tube in such a way that the image of the luminous spot projected on paper by an objective moves along the black-white boundary, having the black field always to the left. The tracking system produces

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L 27670-66

ACC NR: AT6005579

signals which give the coordinates of the spot; these signals are passed through a position analyzer, an indicant-shaping unit, an indicant register, and a decoder; the latter delivers a coded signal corresponding to the recognized character. A reader hookup successfully coped with the task of recognizing various numerals written with fairly wide variations as to their size, shape, and slant. However, the reader failed at line breaks and smudges. As this shortcoming was connected with the very principle of the reader, its further development was discontinued. Orig. art. has: 9 figures and 1 table.

SUB CODE: 012 / SUBM DATE: 31Aug65 / ORIG REF: 002 / OTH REF: 001

Card 2/2 CC

L 27669-66 EWT(d)/T/ENP(1) IJP(c) GG/BB/JXT(BF)/GD

ACC NR: AT6005580

SOURCE CODE: UR/0000/65/000/000/0245/0258

AUTHOR: Petrusenko, V. K.; Semenovskiy, A. G.

54  
8+1

ORG: none

TITLE: Serial correlation-type automatic reader 16<sup>U</sup>

SOURCE: AN UkrSSR. Chitayushchiye avtomaty i raspoznavaniye obrazov (Reading devices and pattern recognition). Kiev, Naukova dumka, 1965, 245-258

TOPIC TAGS: pattern recognition, character recognition, automatic reader

ABSTRACT: Development of an experimental serial reader based on the V. A. Kovalevskiy correlation pattern-recognition method (same issue, p. 46) is reported. The reader keeps a set of standard characters typed on paper; the reflection factors are measured in the course of recognition. Multiplication of the reflection factors of the test character and the standard is performed by projecting a scope-screen image of the test character onto a k-th standard; the light reflected by the standard is proportional to the product of the reflection factors. These three principal units constitute the reader: a control unit, a photoelectric converter, and a computer. The

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ACC NR: AT6005580

control unit comprises a chain of binary counters which, via number-to-voltage converters, control the deflecting systems of two electron-beam tubes (scopes). The photoelectric converter includes three objectives, three photomultipliers, and a two-beam tube. A special analog computer (subtraction averages, normalizing, integration, and digital voltmeter) is used for delivering the recognition results. Testing of the above reader revealed its numerous shortcomings. Hence, another, parallel-type reader was developed instead. Orig. art. has: 5 figures and 13 formulas.

SUB CODE: 09 / SUBM DATE: 31Aug65 / ORIG REF: 005

Card 2/2 CC



*Semenovskiy, A. V.*  
USSR/ Chemistry - Synthesis

Card 1/1 Pub. 22 - 31/63

Authors : Nazarov, I. N., Academician.; Kuznetsov, N. V.; and Semenovskiy, A. V.

Title : Derivation of aromatic acids through the oxidation of the side chains in aromatic compounds with  $\text{HNO}_3$

Periodical : Dok. AN SSSR 99/6, 1003-1006, Dec 21, 1954

Abstract : Experimental data, regarding the oxidation of side chains of aromatic compounds with diluted nitric acid, are presented. It is evident from the above given data that diluted  $\text{HNO}_3$  at a high temperature (about  $200^\circ$ ) smoothly oxidizes all the different side chains of aromatic compounds of a normal and branched nature and including various compounds containing different functional groups. The oxidation of aromatic derivatives with  $\text{HNO}_3$  is sometimes accompanied by the nitration process which leads to the formation of additional products - nitrobenzoic acid. The effect of  $\text{HNO}_3$  concentration, on the yield of oxidation products, is explained. Five references: 2-USA; 1-English and 2-Scandinavian (1949-1954). Table.

Institution: Academy of Sciences USSR, The N. D. Zelinskiy Institute of Organ. Chemistry  
Submitted: November 9, 1954

SHENKOV I., A. V.

SHENKOV I., A. V. -- "On the Direction of the Reaction of Chloromethylation. Certain Patterns of Aromatic Electrophilic Substitution." Acad Sci USSR, Inst of Organic Chemistry named N. D. Zelinsky, Moscow, 1956 (Dissertations for the degree of Candidate in Chemical Sciences.)

SHENKOV I., A. V.  
No. 41, October 1956

SEMEVSKIY, A. V.

USSR/Organic Chemistry. Synthetic Organic Chemistry. E-2

Abs Jour: Ref Zhur - Khimiya, No. 8, 1957, 26921 D.

Author : Semenovskiy, A.V.

Inst : Academy of Sciences of USSR, Institute of  
Organic Chemistry.

Title : Trend of Reaction of Chloromethylations. Some  
Regularities of Aromatic Electrophilous Re-  
placement.

Orig Pub: Avtoref. diss. kand. khim. n., In-t organich.  
Khimii, AN SSSR, M., 1956.

Abstract: No abstract.

Card 1/1

SEMENOVSKIY, A. V.

Chloromethylation of toluene. I. N. Nazarov and A. V. Semenovskii (N. D. Zelinskii Inst. Org. Chem., Moscow) Izv. Akad. Nauk S.S.S.R., Otd. Khim. Nauk, 1956 1487-92; cf. Lock, C.A. 37, 99. Chloromethylation of MePh yields almost equal limits of *o*- and *p*-MeC<sub>6</sub>H<sub>4</sub>CH<sub>2</sub>Cl (I), the proportion being rather independent of the conditions used. Rapid passage of HCl into 200 g. well stirred MePh, 16 g. paraformaldehyde, and 3.5 g. ZnCl<sub>2</sub> 20 min. at 50°, followed by 1 hr. stirring at 60° and aq. treatment gave 71.5% mixed *o*- and *p*-I, b.p. 78-80°, along with 9.5 g. (MeC<sub>6</sub>H<sub>4</sub>)<sub>2</sub>CH<sub>2</sub> isomers, b. 140-6°. Passage of HCl 2 hrs. at 55° into 138 g. MePh, 58.5 g. paraformaldehyde, and 180 ml. concd. HCl gave 70.5% mixed *o*- and *p*-I. The products refluxed with an aq. suspension of chalk 2 hrs. gave *o*- and *p*-MeC<sub>6</sub>H<sub>4</sub>CH<sub>2</sub>OH, b.p. 120-2°, yielding after repeated freezing the pure *p*-isomer, m. 59-9°. Oxidation of the chlorides or the alcs. with CrO<sub>3</sub> in AcOH-H<sub>2</sub>SO<sub>4</sub> gave 39-41% *p*-C<sub>6</sub>H<sub>4</sub>(CO<sub>2</sub>H)<sub>2</sub> (di-Me ester, m. 141-2°). The mixed chlorides (3.5 g.) oxidized in an autoclave with 8 ml. 10% HNO<sub>3</sub> 1.5 hrs. at 200° gave 81% mixed acids from which were obtained 2.02 g. *p*- and 1.3 g. *o*-C<sub>6</sub>H<sub>4</sub>(CO<sub>2</sub>H)<sub>2</sub>. Refluxing the mixed chlorides with a large ex-

cess of 5% HNO<sub>3</sub> (50 g. chlorides/1.7 l. acid) 60 hrs. gave 76.6% mixed toluic acids, sepd. through the Ca salts (the *p*-isomer yielding less sol. salt) into 0.5 g. pure *o*-acid and 0.9 g. *p*-toluic acid.  
G. M. Kosolapoff